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Mr. Witmer Stone notes the occurrence of the genus *Neotoma* in Pennsylvania. The specimens, which were secured near the top of South Mountain in Cumberland Co., evidently belong to a new species, and are described by Mr. Stone under the name *Neotoma pennsylvanica*. This species is distinguished from *N. floridana* by its larger size, its densely hairy and distinctly bicolored tail, and by certain well-marked cranial characters. (Proceeds. Phila. Acad., 1893.)

ENTOMOLOGY.¹

North American Cosmetidæ—A recent study of a considerable collection of Cosmetidæ from the Southern States shows that three well-marked species occur in our fauna. This family belongs to the sub-order Mecostethi of Simon or Laniatores of Thorell, of the order Opileonea. Say described one species, Wood another and Sorensen the third. The three species are closely related and all belong to the genus *Cynorta*. They may be separated by the following key:

Posterior pair of abdominal tubercles very prominent; four or five times as large as anterior pair. *C. ornata*.

Posterior pair of abdominal tubercles little larger than anterior pair.

Dorsum with a distinct yellow Y connected posteriorly with a transverse yellow line. *C. albolineata*.

Dorsum without or with very little yellow marking. *C. sayi*.

Cynorta ornata is abundant in Florida and probably occurs in the South Atlantic States; *C. albolineata* is found in Louisiana and Mississippi; and *C. sayi* in Texas. An illustrated descriptive synopsis of these species is now in the hands of the American Entomological Society for publication in the *Transactions*.—CLARENCE M. WEED.

An American species of Sabacon.—In 1879, the French Arachnologist, M. Eugene Simon established² the genus *Sabacon* for a very peculiar species (*S. paradoxus*) of the family Ischryopsalidæ—one of the smaller families of the Opileonea. The specimen described was immature and the lateral pores were not distinct. No other species of the genus appear to have since been described.

The genus *Sabacon* is especially characterized by the peculiar form of the palpi, the joints of which are large and swollen, and the short

¹Edited by Prof. C. M. Weed, New Hampshire College, Hanover, N. H.

²Arachnides de France, VII, 266.

tarsus is not provided with a claw, but is capable of being turned back against a depression in the tibia. The mandibles are shorter than the body.

During the autumn of 1892, I found under a piece of driftwood along a small creek, a fully developed male belonging to this genus. The species is evidently rare for I have never been able to find another although I have searched persistently.

Sabacon spinosus, n. sp.

Male.—Body 3 mm. long, 2 mm. wide; palpi, 3 mm. long. Legs: first, 11.5 mm.; second, 19 mm.; third, 12 mm.; fourth, 16.5 mm.—Body testaceous with dusky markings; the markings on dorsum arranged transversely and following segmentation. Palpi and legs light testaceous with almost continuous dusky blotches. Ocular tubercle black, very near front margin of cephalothorax, much wider than long, low, with a deep longitudinal sinus but no spines on carinae. A small round, not very distinct pore on each cephalo-lateral angle of the dorsum, not isolated by distinct oblique sinuses. On the dorsum of the cephalothorax and the ocular tubercle are many short, acute, black spines arranged more or less irregularly; back of ocular tubercle on cephalothorax are two transverse rows of similar spines, and on

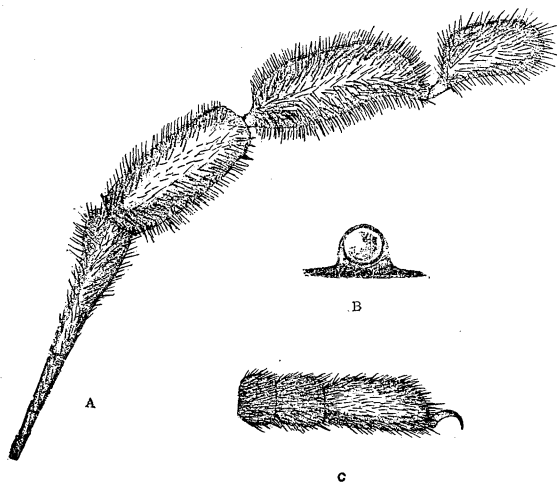


Fig. 1.—*Sabacon spinosus*. Male: A, palpus; B, eye eminence; C, distal tarsi of first leg. All magnified.

abdomen are many more similar rows. The ventrum of abdomen is also provided with such rows, and the ventrum of the cephalothorax including coxæ is covered with these spines. Palpi large and longer than the body; thickly covered with long black spines; femur enlarging a little from base to apex; patella thick, subcylindrical, with a conical tubercle on ventral surface near distal end; tibia slightly petiolated, curved and attenuated distally, hollowed out on under side to receive tarsus; tarsus petiolated, swollen, a little more than half as long as tibia, rounded at end and having no claw; capable of being turned back upon the tibia like a thumb. Mandibles short, much shorter than body; first joint having a large, truncate, wart-like tubercle on dorsal surface near distal end; top of tubercle and dorsal surface of distal portion of the joint thickly furnished with stiff spinose hairs; second joint short and thick, provided dorsally with similar hairs; claws curved, unequal. Legs rather slender, with rows of spinose hairs on proximal joints. Shaft of genital organ long, flattened; toward tip enlarging into a spoon-shaped portion, from which there projects forward a long slender piece gradually coming to very acute point.

Described from one specimen taken at Hanover, New Hampshire.

CLARENCE M. WEED.

The Puparium of *Jurinia*.—In a paper recently sent to the AMERICAN NATURALIST, I described the puparium of *Blepharipeza*. The present paper describes the puparium of *Jurinia*, which genus, while it belongs to the same group as *Blepharipeza* (Hystriiciinæ), shows considerable difference in the puparium. The description is drawn from a puparium of *Jurinia algens* Wd., from which issued a ♀ specimen of the fly, bred by Professor C. P. Gillette from *Hadena lignicolor*, in Colorado.

Puparium of *Jurinia algens* Wd.—Length, 12 mm.; greatest width (8th segment), $5\frac{1}{2}$ mm. Color reddish brown, capital tubercles and anal stigmata blackish. Puparium consisting of 12 segments, including capital and anal plates, more or less cylindrical, bulging a little posteriorly, the anterior end being less in diameter than the posterior end, while the eighth segment is the widest portion. The rugose belts described in *Blepharipeza* are absent, the whole surface being more or less fluted, the flutings showing most plainly on the three anterior segments next the capital plate, becoming less distinct in the middle or giving way to an almost smooth surface, and reappearing in irregular flutings, or minute furrows and ridges, on the last three segments and

anal plate. The larval mouth parts are represented on a portion of the capital plate forming part of the single anterior flap which is present, by two small erect tubercles projecting straight out from the surface of the integument, situated at edge of capital plate, and on opposing sides. The remaining portion of the capital plate, which is absent, the other flap being detached and missing, doubtless bears a third similar erect tubercle, the three being so arranged that they represent the corners of a nearly equilateral triangle. These tubercles are erect, about as high as their basal diameter, ending in a blunt but laterally compressed apex, the apical diameter one way equalling the basal while the other way it is much less than the basal, the apical surface with about 4 faint transverse notches leaving 5 faint transverse ridges. The longitudinal axis of the compressed apex of each tubercle is at an angle of about 45 degrees with the margin of the capital plate. The surface of the capital plate is more or less irregularly transversely, not circularly, fluted. Anal stigmata situated in center of anal plate, consisting of two erect raised organs, not as far apart as the diameter of either, each consisting of 3 ridge-like sections separated by deep notches, the flap-like ridges of each stigma quite closely approximated at their inner ends and widely divergent outwardly, the superior and inferior ones diverging at nearly a right angle. Each of these keel-like ridges bears a longitudinal median suture or fissure its whole length. These stigmatic organs, unlike those of *Blepharipeza* and many other tachinids, project straight out from the surface of the integument, being about as high as their diameter. A little distance ventrally (? dorsally) of the pair of anal stigmata, being situated on anterior border of 10th segment, is a small slit-like opening in the integument resembling a spiracle, its longer diameter being longitudinal to the puparium. The vent-like anal tubercle described in *Blepharipeza* is not present.

Supplementary note to description of puparium of *Blepharipeza*.—In the description above referred to, of the puparium of *Blepharipeza adusta* Lw., I mentioned only one tubercle on the capital plate. This was all that was present on the nearly detached anterior flap of the puparium, the corresponding flap on the opposite side being missing. It should have been mentioned that the absent portion of the capital plate doubtless bore two more tubercles similar to the one described, situated near the edges of the plate as was also the latter, the three being arranged in a triangle, but not so far apart as in *Jurinia*, being of larger size.—C. H. TYLER TOWNSEND.

Notes.—In Bulletin No. 19 of the Iowa Experiment Station, Prof. Herbert Osborn reports further experiments in destroying leaf-hoppers; Mr. H. A. Gossard discusses the Clover-seed Caterpillar (*Grapholitha interstinctana*); and Mr. F. A. Sirrine treats of the Potato-stalk-weevil (*Trichobaris trinotata*). The latter species has been found breeding in "ground cherries" (*Physalis*).

Prof. S. W. Williston contributes to the third number of the Kansas University Quarterly the third part of his *Diptera Brasiliana*, and an illustrated paper on the *Apioceridæ* and their allies.

Mr. F. M. Webster publishes³ extended accounts of the insects affecting the blackberry and raspberry, and the underground insect destroyers of wheat. The former article enumerates 88 species.

Mr. M. V. Slingerland⁴ calls attention to the fact that the black peach aphid (*Aphis persicæ-niger*) is being introduced into New York through peach trees purchased in Delaware. The author describes the indications of the presence of the pest; its past history; its classification, appearance, and life history and remedial measures.

Professor J. B. Smith presents⁵ an interesting illustrated discussion of the grasshoppers, locusts and crickets affecting cranberries. He shows that contrary to the usual belief it is the katydids and not the common grasshoppers that attack this fruit.

A catalogue of the South American species of Calyptrate Muscidæ by Prof. C. H. Tyler Townsend has lately appeared in the *Annals of the New York Academy of Sciences*. (Vol. VII, Dec., 1892).

³Ohio Agr. Expt. Station, Bulletins 45 and 46.

⁴Cornell Univers. Agr. Exp. Station, Bull. 49, p. 325.

⁵New Jersey Agr. Exp. Station, Bull. 98.